

SATISFACTION WITH WORK-LIFE BALANCE IN THE MEDICAL PROFESSION: A REVIEW OF THE
LITERATURE

by

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ABSTRACT

Achieving satisfaction with work-life balance can be challenging as a member of the medical profession. As a future medical student, I sought to gain knowledge on the variables that influence a physician's satisfaction with work-life balance. PubMed, PsychINFO, and CINAHL were systematically searched for articles from the United States published in the last five years relevant to this topic. Articles were excluded if they studied physicians outside of the United States, studied a physician's spouse, or if the participants were physician's assistants or nurses. Physicians and residents experience diverse levels of satisfaction with work-life balance. In comparison to individuals in the work force as a whole, physicians were less likely to be satisfied with work-life balance. The sixteen articles included in this review identified age, gender, marital status, number of children, career stage, work hours, and specialty as contributors to satisfaction with work-life balance. Two categories of interventions are recommended to increase satisfaction with work-life balance: personal and administrative. Self-awareness, goal identification, and development of management skills are a few of the ways that a physician may increase satisfaction with work-life balance.

INTRODUCTION

Work-life balance is a pressing concern evident in the workforce today.^{1,2,3} Work-life balance refers to a blurring of the boundary between home life and work life which causes an imbalance.⁴ Work-life balance can be thought of as an equilibrium: establishing evenness between two factions of life that are equally demanding.⁵ A healthy work-life balance allows individuals to be more content with their work life which may lead to improved

performance.⁵ In recent years, the entrance of women into the workforce and increased technology has put a new strain on the balance between work life and family life.⁶ The rate percentage of female physicians has increased nearly 15% in the past few decades. As a woman and future medical student, I sought to gain knowledge on the prevalence and causes of dissatisfaction with work-life balance among practicing physicians and residents. Work-life balance, for physicians, is an evenness between a career as a practitioner and life outside of work. As a future physician, I understand that one priority in the medical field is the health and well-being of the patient. The improved performance thought to come with adequate work-life balance has the potential to allow a physician to provide the best care to each patient while meeting his/her own needs.⁵ The factors that play into the concept of work-life balance are vast.⁷ Gender, age, marital status, number of children, career stage, hours worked per week, and specialty all may play a role in a physician's ability to achieve balance between a career and a family.^{8,9,10,11,12,13,14,15,16,17,18,19,20} The purpose of this systematic review is to examine recent (< 5 years, US employed) literature and report on degree of satisfaction (or dissatisfaction) with work-life balance and how a physician can influence his/her satisfaction with personal work-life balance.

BACKGROUND

In the past three decades, work-life balance has received significant attention and publicity.²¹ The entrance of women, particularly mothers, into the workplace along with an increase in portable technology has changed the work environment.⁴ In addition there has been an increase in the past few decades of employees working longer hours than in previous decades.⁷ These factors make it challenging to maintain a proper boundary

between work life and home life. Dissatisfaction with work-life balance can be found in many of the developed countries including the United States, the United Kingdom, and Japan.²¹ One major reason to focus on work-life balance is the idea that an increase in balance may correlate with an increase of productivity.⁵ For physicians, a lack of balance between work and life can lead to burnout among other problems.²³ The purpose of this review is to gain knowledge on the work-life balance of practicing physicians and residents rather than the outcome on patients.

METHODS

Inclusion-Exclusion Criteria

Given that careers differ based on time and country, inclusion material included journal articles and books written in the United States in the past five years. Studies containing the words *work-life balance* and *lifestyle balance* were considered for inclusion. Articles that did not examine the work-life balance of practicing physicians or residents were excluded. Studies performed outside of the United States, studies that focused on work-life balance of physician's assistants or nurses, and studies that focused on a spouse rather than the physician were excluded from the present review. Another common cause for exclusion was the presence of supplemental articles that merely reviewed articles already included or excluded from this study.

Literature Search

Three databases were used to identify articles: Cumulative Index to Nursing and Allied Health, PubMed, and PsychINFO. The keywords used included "work life balance or lifestyle

balance,” “physician or doctor or medical professional,” and “happiness or satisfaction.”

Upon entering the keywords, along with a filter for publication dates in the last five years,

Cumulative Index to Nursing and Allied Health returned 18 matches. This search led to 3 articles. The remaining 15 were excluded because they did not meet the inclusion criteria.

An identical search from PubMed returned 61 matches. This search led to 13 journal articles. The remaining 48 were excluded because they did not meet the inclusion criteria.

Another identical search from PsychINFO returned 28 matches. This search led to one book.

The remaining 27 were either already identified by another database or did not meet the inclusion criteria. The overall search strategy led to 16 articles and 1 book as the focus of this review.

The articles identified by the search strategy were annotated and summarized for this review (Appendix II).

FINDINGS

This review examined the factors that affect the work-life balance of residents and practicing physicians. Gender, age, career stage, marital status, children, hours worked per week, and specialty all may influence an individual’s satisfaction with work-life balance.

Gender

In this review, researchers from five studies reported on the influence of gender on satisfaction with work-life balance. Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, and Shanafelt T. determined an odds ratio of 1.37 (95% CI; 1.18-1.60) of satisfaction with work-life balance of males vs females (Table II).¹ A number greater than 1.0 is associated with

increased satisfaction with work-life balance. Shanafelt T, Raymond M, Kosty M et al reported that 25.7% (n=135 or 525) of females and 41.6% (n=205 or 493) of males are satisfied with work-life balance (Table II).¹¹ Sullivan M, Yeo H, Roman S, Bell R, and Sosa J determined that both males and females felt more strain on family life when married (vs single).¹⁴ In their study, 44.7% of married and 31.8% of single males felt that work hours caused a strain on family life. Similarly, 43.1% of married and 35.5% of single females felt the strain (Table II). In relation to children, 52.0% of men with children and 34.1% of men without children felt strain brought on by work hours. Likewise, 56.5% of women with children and 36.0% of women without children felt the same strain (Table II). This suggests that women with children and single women are slightly more likely to feel strain than their male counterparts. Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A determined an adjusted odds ratio of 0.63 (95% CI; 0.42-0.95) for females (vs. males) where a number less than 1.0 is associated with a decrease in work-life balance (Table II).¹⁷ Tracy E, Wiler J, Holschen J, Patel S, and Ligda K found that 91% of women surveyed considered work-life balance a priority in their lives.²⁰

Children

Sullivan M, Yeo H, Roman S, Bell R, and Sosa J looked at the effect of having children on satisfaction with work-life balance.¹⁴ Of the participants with children, 52.8% reported that their hours worked put a strain on family life. Of the participants without any children, 34.8% reported strain.

Marital Status

Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, and Shanafelt T determined an odds ratio of 1.33 (married/partnered vs single or widowed) for satisfaction with work-life balance.⁸

Shanafelt T, Raymond M, Kosty M et al. found that single oncologists were least likely to be satisfied with work-life balance (n=22 of 92; 23.9%).¹¹ Of the married participants, 34.1% were satisfied with work-life balance (n=288 of 877). Of partnered participants, 39.4% were satisfied with work-life balance (n=13 of 30) while 38.9% of widowed participants (n=7 of 18) were satisfied. Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A compared work-life balance among varying marital statuses via an adjusted odds ratio where odds less than 1.0 are associated with a decrease in work-life balance satisfaction.¹⁷ The single group was most likely to be satisfied (1.0). Participants that had been divorced and participants that were currently married had an odds ratio of 0.59 (95% CI, 0.23-1.50) and 0.55 (95% CI, 0.25 to 1.18) respectively. The large range of the 95% confidence interval (CI) for work-life balance led the authors to determine that marital status did not contribute to a dissatisfaction with work-life balance. Sullivan M, Yeo H, Roman S, Bell R, and Sosa J determined that 44.4% of married and 33.3% of single participants felt a strain on family life stemming from hours worked.¹⁴

Age

Three studies reported on the effect of age on satisfaction with work-life balance. Shanafelt T, Raymond M, Kosty M et al. found that, of the 61 oncologists >40 years of age, 31.3% were satisfied with work life balance.¹¹ Participants aged 40-49 and 50-59 were least satisfied with their work-life balance (n= 102 of 361, 28.3%; n= 90 of 333, 27.0%).

Individuals >60 were most likely to be satisfied (n= 128 of 250, 51.2%). Moriarity A, Brown

M, and Schultz L studied age in terms of generation association.¹³ The odds ratio applied to the study revealed to researchers that there was little difference between work-life balance of individuals from Generation X (born from 1964 to 1980) and individuals from the Baby Boomer generation (born from 1946 to 1963). Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A compared work-life balance among age groups via an adjusted odds ratio where odds greater than 1.0 are associated with an increase in work-life balance satisfaction.¹⁷ The <40 age group was least likely to be satisfied (1.0). Participants in the 41-50 age group and the 51-60 age group were more likely to be satisfied than the <40 age group (1.14; 1.26). The >60 age group had the highest satisfaction with work-life balance with an odds ratio of 1.70.

Career Stage

Three studies reported on how current career stage influences an individual's satisfaction with work-life balance. Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, and Shanafelt T studied career stage in three categories: early (0-10 years), mid (11-20 years), and late (>21 years).⁸ Of the 1583 individuals in the early group, 44.0% (n=695) were satisfied with work like balance. The mid group contained 1634 individuals of whom 39.3% were satisfied. The 3906 members of the late group were the most likely to be satisfied with 54.0% (n=2101) being satisfied with work-life balance. In the study by Frugé E, Margolin J, Horton T et al., eight of the 32 mid-career participants reported struggles with balance and burnout.⁹ In the senior group of 29, four participants reported struggles with balancing workload and life. Shanafelt T, Raymond M, Horn L et al. compared fellows to practicing oncologists and

reported that 40.9% of fellows were satisfied with work-life balance while 34.8% of oncologists were satisfied.¹⁰

Hours per Week

In the study by Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, and Shanafelt T, an odds ratio of hours worked per week (for each additional hour) was determined to be 0.95 (95% CI; 0.94-0.95).⁸ A number less than 1.0 is associated with decreased satisfaction with work-life balance. Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A used their survey data to determine an odds ratio as well.¹⁷ A number less than one was associated with decreased satisfaction with work-life balance. The participants that work >60 hours per week had a ratio of 0.44 (95% CI; 0.28-0.72) in comparison to participants that work <60 (1.0).

Specialty

In this review, nine articles focused on specialty as an influencer of work-life balance. Shanafelt T, Boone S, Tan L et al. studied the work-life balance of 24 specialties in comparison to the U.S. population.¹⁵ The percentage of physicians who participated that reported satisfaction with work like balance ranged from 38% for general surgery to 60% for dermatologists, general pediatrics, and preventative medicine. Of all of the physicians who participated between the ages of 29 and 65, 44.9% (n=2,777 of 6,179) either agreed or strongly agreed with the statement “my work schedule leaves me enough time for my personal/family life.” Of the population control subjects who participated in the same age group, 57.0 % (n=1963 of 3,442) either agreed or strongly agreed. This suggests that the general population is more satisfied with work-life balance than U.S. physicians who are in

the same age range. In the study by Frugé E, Margolin J, Horton T et al., twelve challenge forms were turned in by oncologists/hematologists (n=61) to researchers regarding struggles with balancing workload and life.⁹ Shanafelt T, Raymond M, Kosty M et al. studied 1,117 oncologists and reported that 345 (33.4%) agreed or strongly agreed with the statement “My work schedule leaves me enough time for my personal life/family”.¹¹ More than half disagreed (n=374; 36.3%) or strongly disagreed (n=166; 16.1%) with the statement. This suggests that more than half of oncologists are not satisfied with their work-life balance. Roberts D, Shanafelt T, Dyrbye L, and West C. studied 130 internal medicine hospitalists and 448 outpatient general internists via the same statement.¹² Of the 130 hospitalists, 50.0% agreed or strongly agreed with the statement “My work leaves me enough time for my personal life/family.” Of the 448 internists, 42.0% agreed or strongly agreed with the statement. This data suggests that hospitalists are more satisfied than general internists with how much time their work leaves for family and personal time. Moriarity A, Brown M, and Schultz L. determined a work-life balance odds ratio for both baby boom and generation X radiologists (n=1,577).¹³ The odds ratio was <1.0 in relation to work-place satisfaction. This suggests that workplace satisfaction for radiologists is not associated with work-life balance. Surgeons were studied by Shanafelt T, Oreskovich M, and Dyrbye L. Of the physicians who participated in the study, 90.5% (n=6,427 of 7,197) found protecting time away from work with my spouse, family, and friends to be moderately important or extremely important.¹⁶ In addition, 72.4% (n=5,118 of 7,197) of participants indicated incorporating a life philosophy stressing balance in my personal and profession life to be moderately important or extremely important. Of the 16 statements, these two

strategies were ranked 2nd and 9th respectively. Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A generated an adjusted odds ratio for satisfaction with work-life balance for plastic surgeons where a number <1.0 is associated with a decrease in satisfaction.¹⁷ The ratio was 1.0 for primarily aesthetic, 0.75 for mixed, and 0.53 for primarily reconstructive plastic surgeons. This data suggests that plastic surgeons that deal with primarily aesthetic cases are nearly twice as satisfied with work-life balance as those who deal with reconstructive surgery. Microvascular and reconstructive free-flap head and neck surgeons were studied by Contag S, Golub J, Teknos T et al.¹⁸ Researchers determined that "work invading family life" has a significant association ($p < 0.001$) with emotional exhaustion which can lead to burnout. This suggests that microvascular and reconstructive free-flap head and neck surgeons see intrusion by work into family life as a significant problem. Katz A, Mallory B, Gilbert J et al. studied pediatric surgeons.¹⁹ Of the participants, only 11% strongly agreed that they successfully balance professional and family responsibilities.

DISCUSSION

The instruments used in each individual study in this review varied. Cross-sectional studies, open response forms, and level of agreement with a statement were some of strategies used to assess participant's satisfaction with work-life balance. Construct validity is increased by the items used to assess work-life balance in the studies reviewed. For example, the item "my work schedule leaves me enough time for my personal life/family" directly relates to the concept of work-life balance which involves an evenness between work and home life. The instruments employed in the study were all evaluated as measuring the concept of interest, work-life balance.

In this review of the literature, several notable contributors to dissatisfaction with work-life balance were determined including gender, age, marital status, children, hours worked per week, career stage, and specialty. Female physicians are less likely to be satisfied with work-life balance than males in the same specialty.^{11,17} Each article reviewed in the present study determined that, when compared to males, a smaller percentage of women are satisfied with work-life balance. While Tracy E, Wiler J, Holschen J, Patel S, and Ligda K performed a study that determined that 91% of women consider work-life balance a priority,²⁰ there is not a comparable study that addresses whether or not men find work-life balance to be a priority. This is an area where further research will be needed in the future for comparison. Individuals with children, both men and women, are more likely to feel strain on their family life caused by the number of weekly work hours.¹⁴ Among surgical residents, women were also more likely to have delayed child birth and less likely to be married or have children.¹⁴ This data is consistent with an article by Qu, L. that states that women in Australia have pushed back childbirth from an average of 26.5 years of age to 31 years of age over the course of thirty years.²⁴ Researchers determined that being female was a contributing factor in a surgeon's decision not to have children at all.¹⁴ Other research suggests that the challenges of pregnancy and child birth are felt more strongly by residents due to resentment and lack of support from peers.²⁵ These findings suggest that, as a female resident, there is an increased struggle in finding a balance between work and personal life than is seen in their male counterparts. The entrance of more women into the medical profession in the past three decades may play a role in these findings.⁴ Qu suggests that customs in the work place may lag behind social changes.²⁴ In the case of female physicians,

a change in childcare responsibilities may not be at the same pace as the change in number of women entering the medical profession.

Among the studies in this review, there was no clear answer as to whether or not marital status has an effect on the work-life balance of a physician. Sullivan M, Yeo H, Roman S, Bell R, and Sosa J looked at work-life balance in terms of amount of strain on family life.¹⁷

Individuals that were married were more likely to feel a strain on family life brought on by hours worked per week.¹⁷ Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, and Shanafelt T collected data that suggests single or widowed individuals are less likely to be satisfied with work-life balance than individuals that are partnered or married.⁸ However, Shanafelt T, Raymond M, Kosty M et al. suggest that individuals that are widowed are just as likely to be satisfied with work-life balance as partnered or married individuals.¹¹ In contrast, Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A collected data that suggests single plastic surgeons are nearly twice as likely to be satisfied with work-life balance as their married or divorced colleagues.¹⁷ However, researchers from the study were not able to correlate marital status and work-life balance satisfaction due to a large confidence interval. From the literature reviewed in this study, individuals in some specialties are more satisfied with work-life balance while married or partnered whereas individuals in other specialties are more satisfied while single.

In reference to age, Shanafelt T, Raymond M, Horn L, et al. determined that oncologists above the age of 60 are more likely to be satisfied with work-life balance than physicians of any other age.¹⁰ Similarly, Streu R, Hawley S, Gay A, Salem B, Paul A, and Alderman A found that plastic surgeons over the age of 60 were more likely to have work-life balance

satisfaction.¹⁷ The data in this review suggests that physicians in the middle of their career have less satisfaction than physicians any other age. Career stage data revealed similar findings with individuals in later career stages having higher satisfaction than those in early or mid-career stages.^{8,9,10} Another study in this review looked at generational association, rather than age or career stage, among radiologists. It was determined that while age may be a factor in a physician's satisfaction with work-life balance, generational associations are not an influence on the importance of work-life balance.¹³ The baby boom and generation X radiologists studied by Moriarity A, Brown M, and Schultz L did not report any association between work-life balance and workplace satisfaction.¹³ This data suggests that radiologists are able to maintain workplace satisfaction either with or without work-life balance.

In relation to work hours per week, satisfaction with work-life balance decreased with each additional hour worked.^{8,17} Therefore, as work hours per week increases, work-life balance likely decreased for many individuals in the work force, including physicians, in the past decades. Carr P, Gareis K, and Barnett R. also determined that women are more satisfied with work-life balance when they work their personal preference of hours per week as opposed to fewer hours per week.²⁶ This suggests that female physicians do not necessarily want fewer hours, they want to be able to decide on a number of hours worked and the timing of those hours.

Satisfaction with work-life balance varied among specialties in the medical profession. For this specific issue, Shanafelt T, Boone S, Tan L et al. reported the most comprehensive data on the work-life balance of physicians in 24 various specialties. Other articles in this review specifically focused on nine specialties including three surgical sub-specialties. From the

national study by Shanafelt T, Boone S, Tan L et al., it was reported that individuals in preventative medicine, occupational medicine, or environmental medicine along with dermatology and general pediatrics were most satisfied with work-life balance.¹⁵ In contrast, individuals in general surgery or a general surgery subspecialty were least likely to be satisfied with work-life balance. The more in depth articles studied pediatric oncologists/hematologists, oncologists, internal medicine hospitalists, outpatient general internists, general surgeons, plastic surgeons, microvascular and reconstructive free-flap head and neck surgeons, pediatric surgeons, and radiologists. Of the 61 pediatric oncologists/hematologists studied, 71 challenge forms were turned in to researchers. Of these forms, 12 reported that the balance between work and home was a challenge.⁹ This suggests that some pediatric oncologists/hematologists may not view work-life balance as a pertinent problem. A larger study of oncologists by Shanafelt T, Raymond M, Horn L, et al. also determined that work-life balance was a challenge for 65.2% of participants.¹⁰ In comparison, 58.0% of outpatient general internists reported that their work schedule did not leave enough time for family life. However, only 50.0% of hospitalists reported that their work schedule did not leave enough time for family life, which suggests that hospitalists have a higher level of satisfaction with work-life balance than oncologists or internists. The radiologists studied by Moriarity A, Brown M, and Schultz L reported an odds ratio of less than 1.0 for the impact of work-life balance on work place satisfaction in comparison to other workplace characteristics.¹³ This suggests that the radiologists studied did not see work-life balance as a variable that influences work-place satisfaction. However, the researchers did not determine the actual level of work-life balance maintained by

radiologists in the study. Further research is needed to determine if radiologists are satisfied with personal work-life balance. Similarly, research performed by Shanafelt T, Oreskovich M, and Dyrbye L allowed participants to rank wellness promotion strategies by personal importance.¹⁶ The two wellness strategy statements relating to work-life balance in the study were “I protect time away from work with my spouse, family, and friends” and “I incorporate a life philosophy stressing balance in my personal and professional life.”¹⁶ The two were ranked second and ninth respectively out of 16 statements. The highest ranked statement was “I find meaning in my work.” This data suggests that finding meaning in work and saving time for family and friends are viewed as important aspects in the wellness promotion of surgeons.

The articles in this review recommended several strategies for increasing satisfaction with work-life balance (Table IX). The strategies fall in to two main categories: personal and administrative. Personal strategies for increasing satisfaction with work-life balance included mindfulness, self-awareness, development of management skills and realistic expectations. In terms of mindfulness, Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, and Rakel D introduced an abbreviated mindfulness intervention strategy.²⁷ This article is unique to the current review because it is the only study that tested the effectiveness of a work-life balance intervention. Data from the mindfulness study suggests that emotional exhaustion decreased and quality of life increased over the course of the intervention. Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, and Rakel D suggest that mindfulness training may be an inexpensive way for physicians to promote personal well-being.¹⁷ Anne S, a practicing physician, and Surawicz indicate the importance of self-awareness.^{23,28} This

entails recognizing the presence of an imbalance so it can be addressed. Development of management skills was recommended by Frugé E, Margolin J, Horton T et al. as a strategy to increase satisfaction with work-life balance.⁹ It was suggested that application of these management skills might promote a healthier work-life balance. Establishing realistic expectations during the training stages is recommended by Shanafelt T, Raymond M, Horn L et al. The study suggests that some oncology fellows have career expectations that are not realized once they enter the profession.¹⁰ As a final personal strategy, Surawicz and Shanafelt T, Oreskovich M, Dyrbye L indicate personal wellness as a way to increase work-life balance satisfaction.^{16,23} Regular visits to a primary care physician, a healthy diet, and aerobic exercise are suggested as a part of personal wellness. Administrative strategies are successful upon agreement with a supervisor or institution. Reduction in work hours is suggested by Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T as an intervention.⁸ This strategy is in agreement with other studies in this review that determined satisfaction with work-life balance decreases with each additional hour worked per week. Similarly, Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A suggest that job sharing may be another viable option to balance work and home life.¹⁷ In relation to fellows and residents, Sullivan M, Yeo H, Roman S, Bell R, Sosa J and Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A recommend an option for training flexibility.^{14,17} In particular, flexibility around the challenges of childbirth is mentioned. Finally, Frugé E, Margolin J, Horton T et al. suggest that institutions should ensure the availability of workshops and trainings for physicians.⁹ The availability of workshops regarding balance, management, and shifting workload enables physicians to actively try to improve their personal work-life balance. Finally,

Shanafelt T, Oreskovich M, and Dyrbye L suggest that the quality of life for physicians can be improved by implementing personal wellness strategies such as weekly aerobic exercise and annual visits to a primary care physician.¹⁶

This review has a number of limitations and strengths. First, many of the articles included in the review have the same first author. In addition, several of the other authors were the same amongst the articles in this review. The overlap of authors may introduce a bias because there is a small number of individuals weighing in on the data collected on the subject of work-life balance. This bias is made stronger by the fact that there are only 16 articles in this review. In addition, many individual articles in this review utilized voluntary responses from participants. This may introduce response bias because the individuals that respond to such surveys may be those who are particularly concerned with work-life balance in comparison to other individuals in the same field. However, the studies allowed participants to self-report satisfaction with work-life balance. This is beneficial because balance between work and life may be seen differently by each participant. The inclusion of one comprehensive national study of 24 specialties as well as 9 articles that more thoroughly reviewed specialties strengthened this review. However, only one article addressed the effects of intervention strategies on an individual's satisfaction with work-life balance.

CONCLUSION

In this review of the literature age, gender, marital status, number of children, career stage, work hours, and specialty may play a role in a physician's satisfaction with work-life

balance. In relation to age, physicians over the age of 60 or in a late career stage are more likely to have work-life balance satisfaction than physicians at any other age or career stage. In each study relating to gender, researchers concluded that women are less satisfied with work-life balance than their male counterparts. Similarly, individuals with children are less likely to be satisfied with how much time their work leaves for family life. Future study is required to explore how to best support women in the medical profession. In addition, further research is needed to explore whether or not the proposed intervention strategies will be effective for improvement of satisfaction with work-life balance.

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APPENDIX I

Table I. Articles returned from literature search (12/16/14 - 2/28/15)				
work life balance or lifestyle balance' AND 'physician or doctor or medical professional' AND 'happiness or satisfaction'				
		CINAHL	PubMed	PsychINFO
Returned		18	61	28
Excluded		15	48	27
Reason for Exclusion	Outside of the U.S.	4	30	11
	More than 5 years old			2
	Focus on physician's assistants or nurses	3		1
	Focus on physician's spouse or patient	1	1	1
	Article reviews	1		
	Did not assess work-life balance	3	17	5
	Studied academic medicine/directors	1		6
	Unable to obtain full text	1		
	Previously identified articles	1		1
	Included	3	13	1
	Total	16 articles and 1 book		

Table II. Gender effect on work-life balance		
Article	Method	Conclusion
Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T.	The survey was sent to 89,831 physicians from various disciplines of whom 27,276 opened the email and were considered "contacted." Of those contacted, 7,288 completed the survey. The researchers determined work-life balance satisfaction by asking participants to give their level of agreement with the statement that their work schedule leaves them enough time for their personal or family life.	The male (vs female) odds ratio for work-life balance was determined to be 1.37 (1.18-1.60) indicating that women are not as satisfied with work-life balance as men across medical professions.
Shanafelt T, Raymond M, Kosty M et al.	The survey was comprised of 60 questions and sent to 2,998 oncologists of whom 1,117 (37.3%) fully completed the survey. Satisfaction with work-life balance was determined by asking the participants to rate their agreement with the statement "My work schedule leaves me enough time for my personal life/family" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	In this study, 41.6% (n=205 of 493) of males were satisfied with work-life balance while only 25.7% (n=135 of 525) of females were satisfied with work-life balance. This suggests that female oncologists are less likely to be satisfied with work-life balance than male oncologists.
Sullivan M, Yeo H, Roman S, Bell R, Sosa J.	This study includes a cross-sectional survey sent to 5,345 general surgery residents with an 82.4% response rate (n=4,402). The concept of work-life balance was addressed by responses to the statement "The hours I am working are causing a strain on my family life" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	In this study, 44.7% of married and 31.8% of single males felt that work hours caused a strain on family life. Similarly, 43.1% of married and 35.5% of single females felt the strain. In relation to children, 52.0% of men with children and 34.1% of men without children felt strain brought on by work hours. Likewise, 56.5% of women with children and 36.0% of women without children felt the same strain. This suggests that women with children are slightly more likely to feel strain than their male counterparts.

Table II. Gender effect on work-life balance (cont.)		
Article	Method	Conclusion
Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A.	The survey used a five-point response range from highly dissatisfied (1) to highly satisfied (5). For analysis, 1-3 were considered to be dissatisfied and 4-5 were considered to be satisfied. A scale of satisfaction was created using three statements: 1) I have too much work to do everything well, 2) I am satisfied with my career, and 3) I am satisfied with my time management between career and personal responsibilities. The survey was sent to member of the American Society of Plastic Surgeons with a 71% response rate (n=708).	The male adjusted odds ratio for work-life balance was determined to be 1 in comparison to 0.63 for women. This data indicates that female plastic surgeons are not as satisfied with work-life balance as their male counterparts.
Tracy E, Wiler J, Holschen J, Patel S, Ligda K.	A survey was sent to 596 female AMA members in regards to physician issues and practice experiences. The quota of 148 responses was reached.	The study reports that 91% of the female respondents indicated that achieving work-life balance is a priority in their life.

Table III. The effect of having children on work-life balance		
Article	Method	Results
Sullivan M, Yeo H, Roman S, Bell R, Sosa J.	This study includes a cross-sectional survey sent to 5,345 general surgery residents with an 82.4% response rate (n=4,402). The concept of work-life balance was addressed by responses to the statement "The hours I am working are causing a strain on my family life" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	In this study, 52.8% of participants with children (n=1,064) and 34.8% of participants without children (n=3,141) agreed that their hours worked per week cause a strain on their family life. No differentiation was made between men and women. This suggests that participants with children are more likely to have family strain caused by work.

Table IV. Marital status effect on work-life balance		
Article	Method	Conclusion
Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T.	The survey was sent to 89,831 physicians from various disciplines of whom 27,276 opened the email and were considered "contacted." Of those contacted, 7,288 completed the survey. The researchers determined work-life balance satisfaction by asking participants to give their level of agreement with the statement that their work schedule leaves them enough time for their personal or family life.	The married or partnered (vs single or widowed) odds ratio for work-life balance was determined to be 1.33 (1.08-1.63) indicating that individuals that are single or widowed are not as satisfied with work-life balance as individuals that are married or partnered.
Shanafelt T, Raymond M, Kosty M et al.	The survey was comprised of 60 questions and sent to 2,998 participants of whom 1,117 (37.3%) fully completed the survey. Satisfaction with work-life balance was determined by asking the oncologists to rate their agreement with the statement "My work schedule leaves me enough time for my personal life/family" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	In this study, 23.9% (n=22 of 92) of single participants, 34.1% (n=299 of 877) of married participants, 39.4% (n=13 of 33) of partnered participants, and 38.9% (n=7 of 18) of widowed participants were satisfied with work-life balance. This suggests that physicians that have never been married are least likely to be satisfied with their balance between work and home life.
Sullivan M, Yeo H, Roman S, Bell R, Sosa J.	This study includes a cross-sectional survey sent to 5,345 general surgery resident with an 82.4% response rate (n=4,402). The concept of work-life balance was addressed by responses to the statement "The hours I am working are causing a strain on my family life" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	In this study, 44.4% of married participants and 33.3% of single participants agreed that "The hours I'm working are causing strain on my family life." In response to the same statement, 43.1% of married women and 44.7% of married men agreed. This suggests that both married men and women feel more strain than their single counterparts.

Table IV. Marital status effect on work-life balance (cont.)

Article	Method	Conclusion
Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A.	The survey used a five-point response range from highly dissatisfied (1) to highly satisfied (5). For analysis, 1-3 were considered to be dissatisfied and 4-5 were considered to be satisfied. A scale of satisfaction was created using three statements: 1) I have too much work to do everything well, 2) I am satisfied with my career, and 3) I am satisfied with my time management between career and personal responsibilities. The survey was sent to member of the American Society of Plastic Surgeons with a 71% response rate (n=708).	The adjusted odds ratio for satisfaction with work-life balance was 1 for single participants, 0.59 for divorced participants, and 0.55 for married/partnered participants. However, the confidence interval was large for all three categories so the study concluded that marital status did not have a significant effect on satisfaction with work-life balance.

Table V. Effect of age on work-life balance

Article	Method	Conclusion
Shanafelt T, Raymond M, Kosty M et al.	The survey was comprised of 60 questions and sent to 2,998 participants of whom 1,117 (37.3%) fully completed the survey. Satisfaction with work-life balance was determined by asking the oncologists to rate their agreement with the statement "My work schedule leaves me enough time for my personal life/family" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	The study found that 31.3% of participants <40 years of age, 28.3% of participants between 40 and 49 years of age, 27.0% of participants between 50 and 59 years of age, and 51.2% of participants >60 years of age were satisfied with work life balance. This suggests that physicians older than 60 are most likely to be satisfied with their balance between work and home life.
Moriarty A, Brown M, Schultz L.	Nineteen different workplace characteristics were tested with their association to workplace satisfaction among radiologists. One of the characteristics included was work-life balance. The researchers looked at data from 1,577 baby boom and generation X radiologists.	This study found that there was no significant association between generation membership and work-life balance.

Table V. Effect of age on work-life balance (cont.)		
Article	Method	Conclusion
Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A.	The researchers used a five-point response range from highly dissatisfied (1) to highly satisfied (5). For analysis, 1-3 were considered to be dissatisfied and 4-5 were considered to be satisfied. A scale of satisfaction was created using three statements: 1) I have too much work to do everything well, 2) I am satisfied with my career, and 3) I am satisfied with my time management between career and personal responsibilities. The survey was sent to member of the American Society of Plastic Surgeons with a 71% response rate (n=708).	The adjusted odds ratio for satisfaction with work-life balance was 1 for <40 years of age, 1.14 for 41-50 years of age, 1.26 for 51-60 years of age, and 1.70 for >60 years old. This indicates that individuals older than 60 are most likely to be satisfied with their work-life balance.

Table VI. Effect of career stage on work-life balance		
Article	Method	Conclusion
Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T.	The survey was sent to 89,831 physicians from various disciplines and 27,276 opened the email and were considered "contacted." Of those contacted, 7,288 completed the survey. The researchers determined work-life balance satisfaction by asking participants to give their level of agreement with the statement that their work schedule leaves them enough time for their personal or family life.	A "yes" response to a question about satisfaction with work-life balance was given by 44.0% of early career stage respondents (n=695 of 1583), 39.3% of mid-career stage respondents (n=683 of 1634), and 54.0% of late career respondents (n=2101 of 3906). This suggests that individuals in the mid-career stage are least satisfied with their current work-life balance.

Table VI. Effect of career stage on work-life balance (cont.)		
Article	Method	Conclusion
Frugé E, Margolin J, Horton T et al.	<p>The 61 pediatric hematologists/oncologists were asked to fill out a demographic form followed by an individual reflection on their specific career challenges. The participants were then instructed to fill out a form outlining the challenges identified in three specific ways. 1) A challenge that had to do with career stage 2) the setting in which that challenge occurs and 3) suggestions on how the problem could be addressed and solved. Multiple forms were allowed from each participant.</p>	<p>From the mid-career group (n=32), eight challenge forms were turned in regarding balance and burnout. From the senior career group (n=29), four challenge forms were turned in regarding balancing workload and life. Researchers suggested the use of workshops on shifting workload or developing management skills to abate the work-life balance issues.</p>
Shanafelt T, Raymond M, Horn L et al.	<p>The post-examination survey was completed by 1,345 of the 1,373 oncology fellows that took the 2013 MedOnc ITE. Personal and profession characteristics of participants were studied to measure burnout and career satisfaction. Participants were asked about their future career plans, professional expectations, expected hours worked per week, expected number of nights on call, and other questions regarding a future career in oncology.</p>	<p>Of the participants that were fellows, 40.9% were satisfied with work-life balance (n=487 of 1,345). The percentage of practicing oncologists that were satisfied with work-life balance was 34.8% (n=374 of 1,117). The data suggests that fellows underestimate the workload that coming with oncology and suggests that unrealized expectations may contribute to a dissatisfaction with work-life balance</p>

Table VII. Effect of hours worked per week on work-life balance		
Article	Method	Conclusion
Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T.	The survey was sent to 89,831 physicians from various disciplines and 27,276 opened the email and were considered "contacted." Of those contacted, 7,288 completed the survey. The researchers determined work-life balance satisfaction by asking participants to give their level of agreement with the statement that their work schedule leaves them enough time for their personal or family life.	The hours worked per week (for each additional hour) odds ratio for work-life balance was determined to be 0.95 (0.94-0.95) suggesting that individuals become less satisfied with work-life balance with each addition hour worked per week.
Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A.	The researchers used a five-point response range from highly dissatisfied (1) to highly satisfied (5). For analysis, 1-3 were considered to be dissatisfied and 4-5 were considered to be satisfied. A scale of satisfaction was created using three statements: 1) I have too much work to do everything well, 2) I am satisfied with my career, and 3) I am satisfied with my time management between career and personal responsibilities. The survey was sent to member of the American Society of Plastic Surgeons with a 71% response rate (n=708).	The adjusted odds ratio for satisfaction with work-life balance was 1 for <60 work hours per week and 0.44 for >60 work hours per week. The 95% confidence interval was from 0.28-0.72. This data suggests that participants that work >60 hours per week and less likely to be satisfied with their work-life balance than individuals that work <60 hours per week.

Table VIII. The effect of various specialties on work-life balance		
Article	Method	Conclusion
Shanafelt T, Boone S, Tan L et al.	Satisfaction with work-life balance was determined by asking physicians to rate their agreement with the statement "My work schedule leaves me enough time for my personal life/family" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree." The survey was sent to 27,276 physicians of whom 7,288 (26.7%) responded.	Of the physicians who participated between the ages of 29 and 65, 44.9% (n=2,777 of 6,179) either agreed or strongly agreed with the statement. Of the population control subjects who participated in the same age group, 57.0 % (n=1963 of 3,442) either agreed or strongly agreed. This suggests that the general population is more satisfied with work-life balance than U.S. physicians.

Table VIII. The effect of various specialties on work-life balance (cont.)		
Article	Method	Conclusion
Shanafelt T, Raymond M, Kosty M et al.	The survey was comprised of 60 questions and sent to 2,998 participants of whom 1,117 (37.3%) fully completed the survey. Satisfaction with work-life balance was determined by asking the oncologists to rate their agreement with the statement "My work schedule leaves me enough time for my personal life/family". The options given were strongly agree, agree, neutral, disagree, and strongly disagree. Those who answered strongly agree or agree were determined to be satisfied with their work-life balance.	Of the oncologists that responded, 345 (33.4%) agreed or strongly agreed with the statement. More than half disagreed (n=374; 36.3%) or strongly disagreed (n=166; 16.1%). This suggests that more than half of oncologists are not satisfied with their work-life balance.
Roberts D, Shanafelt T, Dyrbye L, West C.	Satisfaction with work-life balance was determined by asking the 130 internal medicine hospitalists and 448 outpatient general internists to rate their agreement with the statement "My work schedule leaves me enough time for my personal life/family" accompanied by a 5-point Likert response scale ranging from "strongly disagree" to "strongly agree."	Of the 130 hospitalists, 50.0% agreed or strongly agreed with the statement. Of the 448 internists, 42.0% agreed or strongly agreed. This data suggests that hospitalists are more satisfied with how much time their work leaves for family and personal time.
Moriarty A, Brown M, Schultz L.	Nineteen different workplace characteristics were tested with their association to workplace satisfaction among radiologists. One of the characteristics included was work-life balance. The researchers looked at data from 1,577 baby boom and generation X radiologists.	A work-life balance odds ratio for both baby boom and generation X radiologists was found to be <1.0 in relation to work-place satisfaction. This suggests that workplace satisfaction for radiologists is not associated with work-life balance.

Table VIII. The effect of various specialties on work-life balance (cont.)

Article	Method	Conclusion
Shanafelt T, Oreskovich M, Dyrbye L.	The survey included 16 statements about the importance of wellness promotion strategies and was sent to 27,457 surgeons of whom 7,197 participated (28.7%). The responses were reported on a scale from "not important to me" to "essential" and included the statements "I incorporate a life philosophy stressing balance in my personal and professional life" and "I protect time away from work with my spouse, family, and friends."	Of participants, 90.5% (n=6,427 of 7,197) found protecting time away from work to be moderately important or extremely important. In addition, 72.4% (n=5,118 of 7,197) of participants indicated incorporating a life philosophy stressing balance in my personal and profession life to be moderately important or extremely important. Of the 16 statements, these two strategies were ranked 2nd and 9th respectively. This suggests that saving time for family is very important to surgeons.
Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A.	The survey, sent to 708 plastic surgeons with a response rate of 71% (n=505), used a five-point response range from highly dissatisfied (1) to highly satisfied (5). For analysis, 1-3 were considered to be dissatisfied and 4-5 were considered to be satisfied. A scale of satisfaction was created using three statements: 1) I have too much work to do everything well, 2) I am satisfied with my career, and 3) I am satisfied with my time management between career and personal responsibilities.	An adjusted odds ratio for satisfaction with work-life balance was found to be 1.0 for primarily aesthetic, 0.75 for mixed, and 0.53 for primarily reconstructive plastic surgeons where odds less than 1.0 are associated with a decrease in work-life balance. This data suggests that plastic surgeons that deal with primarily aesthetic cases are nearly twice as satisfied with work-life balance as those who deal with reconstructive surgery.
Contag S, Golub J, Teknos T et al.	A total of 60 microvascular and reconstructive free-flap head and neck surgeons were included in the study of the 141 mailed surveys. The researchers of this study looked at risk factors that lead to emotional exhaustion. Participants were asked to rate the degree to which common professional stressors affect their personal life on a scale of no effect to extreme effect.	Researchers determined that "work invading family life" has a significant association with emotional exhaustion which can lead to burnout. This suggests that microvascular and reconstructive free-flap head and neck surgeons see intrusion by work into family life as a significant problem.
Katz A, Mallory B, Gilbert J et al.	In this study, 282 pediatric surgeons and 80 of their partners were surveyed. Researchers collected information about career satisfaction and work-family balance. A Likert scale was used to rank agreement with various statements relating to career satisfaction.	Only 11% of participants strongly agreed that they balanced professional and family responsibilities. However, the other data relating to this statement was not reported by this study.

Table IX. Interventions to increase satisfaction with work-life balance		
	Strategy	Article
Personal	Mindfulness	Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, Rakel D and Surawicz C
	Development of management skills	Frugé E, Margolin J, Horton T et al
	Realistic expectations	Shanafelt T, Raymond M, Horn L et al
	Self-awareness	Anne S and Surawicz C
	Personal wellness	Shanafelt T, Oreskovich M, Dyrbye L and Surawicz C
Administrative	Reduction in hours	Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T
	Availability of workshops	Frugé E, Margolin J, Horton T et al
	Flexibility in training	Sullivan M, Yeo H, Roman S, Bell R, Sosa J and Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A
	Job-sharing	Sullivan M, Yeo H, Roman S, Bell R, Sosa J and Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A

APPENDIX II

Appendix II provides an article summary of each article included in this review of the literature. The summaries were created as a part of the data collection process. They include keywords, confines, study sample, research methods, article findings, and a reflection on the relevance of the article to the current review.

Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T. Physician Satisfaction and Burnout at Different Career Stages. *Mayo Clinic Proceedings*. 2013;88(12):1358-1367. doi:10.1016/j.mayocp.2013.07.016.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: The survey was sent to 89,831 physicians from various disciplines and 27,276 opened the email and were considered “contacted.” Of those contacted, 7,288 completed the survey.

Method: The researchers determined work-life balance satisfaction by asking participants to give their level of agreement on a Likert scale with the statement that their work schedule leaves them enough time for their personal or family life.

Findings: The objective of this article is to learn more about the work lives and satisfaction of various medical professionals across multiple fields. The results found that 44% of physicians in their early career stage were satisfied with work life balance, 39.3 % were

satisfied in their middle career stage, and 54 % were satisfied in their late career phase. The study also compared the work-life balance of males and females as well as married or unmarried individuals

Conclusion: In this study, work-life balance was determined by asking the physicians about their level of agreement with the fact that their work life allowed enough time for their personal life. An answer of “agree” or “strongly agree” was considered to have adequate work-life balance. It was determined that work-life balance varies between genders as well as between married and unmarried individuals. Work-life balance also appears to change with career stage. Those in the middle of their career (10-20 years) had the lowest satisfaction with career choice and work-life balance.

Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, Rakel D. Abbreviated Mindfulness Intervention for Job Satisfaction, Quality of Life, and Compassion in Primary Care Clinicians: A Pilot Study. *The Annals of Family Medicine*. 2013;11(5):412-420. doi:10.1370/afm.1511.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 30 primary care physicians – 23 participated throughout the entire study

Method: The participants took part in a mindfulness course and were evaluated at day 0, day 1, week 8 and month 9. The mindfulness course focused on teaching the basic practices of mindful meditation and incorporation of that mindset into clinical work. Quality of life was measured using three different scales: Depression Anxiety Stress Scales (DASS), Perceived Stress Scale (PSS), and Resilience Scale (RS).

Findings: The study conducted a survey of 30 individuals, 23 of which completed all four responses. The findings determined that the abbreviated mindfulness intervention helped to reduce burnout as well as encourage a sense of well-being. From day 0 to month 9, emotion exhaustion and depersonalization dropped on average for the group. In addition, a sense of personal accomplishment rose. Depression, anxiety, and stress each decreased over the course of the study. Stress levels saw the largest decrease between day 0 and month 9.

Conclusion: While this study does not directly deal with work-life balance. The factors looked at in the study play a crucial role in an individual's ability to attain work-life balance.

Frugé E, Margolin J, Horton T et al. Defining and managing career challenges for mid-career and senior stage pediatric hematologist/oncologists. *Pediatric Blood & Cancer*. 2010;55(6):1180-1184. doi:10.1002/pbc.22658.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: ASPHO annual meeting members; 29 mid-career professionals (23 women to 9 men) and 32 senior professionals (26 men to 3 women)

Method: The participants were asked to fill out a demographic form followed by an individual reflection on their specific career challenges. The participants were then instructed to fill out a form outlining the challenges identified in three specific ways. 1) A challenge that had to do with career stage 2) the setting in which that challenge occurs and 3) suggestions on how the problem could be addressed and solved. Multiple forms were allowed from each participant.

Findings: From the mid career group (n=32), eight challenge forms were turned in regarding balance and burnout. From the senior career group (n=29), four challenge forms were turned in regarding balancing workload and life. The article suggested the use of workshops on shifting workload or developing management skills to abate the work-life balance issues among pediatric oncologists/hematologists.

Conclusion: While this study does not directly deal with work-life balance. The factors looked at in the study play a crucial role in an individual's ability to attain work-life balance.

Shanafelt T, Raymond M, Horn L et al. Oncology Fellows' Career Plans, Expectations, and Well-Being: Do Fellows Know What They Are Getting Into?. *Journal of Clinical Oncology*. 2014;32(27):2991-2997. doi:10.1200/jco.2014.56.2827.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 1,637 oncology fellows contacted – 1,345 took the post-examination survey from the MedOnc ITE – median age of 33 years – 47.2 % women, 73.6% married, 49.6% had children

Method: Survey inquiring about personal and profession characteristics to measure burnout and career satisfaction. Participants were asked about their future career plans, professional expectations, expected hours worked per week, expected number of nights on call, and other questions regarding a future career in oncology.

Findings: The objective of this article is to determine the career plans, expectations, and overall wellbeing of oncology fellows in comparison to practicing oncologists. The percentage of oncology fellows satisfied with work-life balance was 40.9% while the percentage of practicing oncologists with work-life balance satisfaction was only 34.8%. However, oncology fellows overall had more indicators of burnout in comparison to practicing oncologists. Overall, oncology fellows underestimated nights on call per week, hours at home working on work tasks, and total work hours per week in comparison to the actual numbers reported by oncologists.

Conclusion: In this study, work-life balance was determined by asking the physicians about their level of agreement on a Likert scale with the fact that their work life allowed enough time for their personal life. An answer of “agree” or “strongly agree” was considered to

have adequate work-life balance. It was determined that satisfaction with work-life balance was higher among fellows than practicing oncologists. However, neither group had more than 50% of participants satisfied with their work-life balance.

Anne S. Burnout: Recognize and Reverse. *Otolaryngology -- Head and Neck Surgery*.

2014;151(1):4-5. doi:10.1177/0194599814534592.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: This article was not a survey on work-life balance so there was no sample.

Method: This article did not have a method due to the nature of the article. Anne suggests methods for reversing burnout in the medical profession.

Findings: The objective of this article was to present ways in which a physician can recognize and reverse the causes of burnout. The article states that medical areas, substance abuse, and neglect are associated with burnout. Anne identifies self-awareness, healthy personal relationships, appropriate health practices, and achievement of work-life balance as ways to combat burnout in the workplace.

Conclusion: This article, while not a survey, identifies work-life balance as a present issue in the medical field. Burnout must be recognized before it is reversed. Anne gives strategies by which this can occur.

Surawicz C. J. Edward Berk Distinguished Lecture: Avoiding Burnout: Finding Balance
Between Work and Everything Else. *The American Journal of Gastroenterology*.
2014;109(4):511-514. doi:10.1038/ajg.2014.44.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare
professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample/Method: This article was a lecture rather than an actual study.

Findings: This article is based on a lecture given as the J. Edward Berk Distinguished Lecture at the Annual American College of Gastroenterology meeting. The article focuses on the definition, prevalence, causes, and repercussions of burnout. The concept of work-life balance comes in as a possible treatment or prevention tactic of burnout. Surawicz discusses how to integrate professional and personal goals in a way that will provide balance as well as leave a legacy for ourselves. Better work-life balance was achieved when an individual could control their own work schedule. This includes part-time work, flexible hours, and sensible work scheduling. Surawicz notes that professionals should take a hint from the work-hour restrictions given by residency programs in order to avoid burnout. Finally, an individual should be both realistic and generous, to their own needs, in their planning of their work schedule.

Conclusion: While burnout will always be prevalent in the medical field, being realistic about work hours and the need for time off can help abet the problem. Work-life balance can be attained through this realistic schedule setting along with combining career and personal goals to create a life plan.

Shanafelt T, Raymond M, Kosty M et al. Satisfaction With Work-Life Balance and the Career and Retirement Plans of US Oncologists. *Journal of Clinical Oncology*. 2014;32(11):1127-1135. doi:10.1200/jco.2013.53.4560.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 2,998 oncologists were contacted; 1,490 turned in the survey; 1,117 fully completed the survey; 1,058 were used for the study because they were actively working (not retired)

Method: The study was comprised of 60 questions. Satisfaction with work-life balance was determined by asking the participants to rate their agreement on a Likert scale with the statement "My work schedule leaves me enough time for my personal life/family". The options given were strongly agree, agree, neutral, disagree, and strongly disagree. Those who answered strongly agree or agree were determined to be satisfied with their work-life balance.

Findings: Of the participants, 345 rated their work-life balance with “agree or strongly agree”, 145 were “neutral”, 374 “disagreed”, and 166 “strongly disagreed”. The percentage of oncologists that disagreed or strongly disagreed was higher (52.4% in comparison to 36.9%) than the percentage taken in a different study that looked at physicians from all specialties (this study is also included in my thesis). This suggests that oncologists struggle more with work-life balance than physicians as a whole. Demographic factors played a large role in WLB satisfaction. Women were far less satisfied than their male counterparts. In addition, oncologists with adult children were more likely to have WLB than those who had children under the age of 22. Finally, those who worked more hours per week and more night shifts were less likely to be satisfied with work-life balance.

Conclusion: Several demographic factors impact physicians satisfaction with work-life balance.

Roberts D, Shanafelt T, Dyrbye L, West C. A national comparison of burnout and work-life balance among internal medicine hospitalists and outpatient general internists.

Journal of Hospital Medicine. 2014;9(3):176-181. doi:10.1002/jhm.2146.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 27,276 received an invitation to participate; the study focused on the 130 internal medicine hospitalists and 448 outpatient general internists who participated in the survey.

Method: Satisfaction with work-life balance was determined by asking the participants to rate their agreement on a Likert scale with the statement “My work schedule leaves me enough time for my personal life/family”. The options given were strongly agree, agree, neutral, disagree, and strongly disagree. Those who answered strongly agree or agree were determined to be satisfied with their work-life balance.

Findings: Of the 130 internal medicine hospitalist participants, 65 rated their work-life balance with “agree or strongly agree”, 21 were “neutral”, 27 “disagreed”, and 17 “strongly disagreed”. Of the 448 outpatient participants, 187 rated their work-life balance with “agree or strongly agree”, 66 were “neutral”, 119 “disagreed”, and 73 “strongly disagreed”. The percentage of hospitalists that had satisfaction with WLB was higher than that of the outpatient internists (50% vs. 42%).

Conclusion: Even in two specialties that are fairly similar, work-life balance satisfaction is still not the same. This may be due to the newness of “hospitalist” as a term/career.

Moriarity A, Brown M, Schultz L. We Have Much in Common: The Similar Inter-generational Work Preferences and Career Satisfaction Among Practicing Radiologists. *Journal of the American College of Radiology*. 2014;11(4):362-368.
doi:10.1016/j.jacr.2013.08.008.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: An electronic survey was distributed to ACR, Society of Chairs of Academic Radiology Departments, and Association of Program Directors in Radiology. From the surveys sent, 1,577 completed responses were received from actively practicing baby boomers and generation X radiologists.

Method: Nineteen different workplace characteristics were tested with their associated to workplace satisfaction. One of the characteristics included was work-life balance.

Demographic information included practice size, practice type, and involvement in administration.

Findings: Work-life balance was one aspect of workplace satisfaction in this study. Over 63% of radiologists in the survey reported spending too little time at home suggesting dissatisfaction with work-life balance. However, both generation X and baby boom radiologists gave work-life balance an odds ratio of <1.0 in relation to relevance to workplace satisfaction.

Conclusion: This study did not reveal satisfaction with work-life balance of radiologists.

However, it was determined that radiologists do not see work-life balance as an influencer of work-life satisfaction.

Sullivan M, Yeo H, Roman S, Bell R, Sosa J. Striving for Work-Life Balance. *Annals of Surgery*.

2013;257(3):571-576. doi:10.1097/sla.0b013e318269d05c.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: This study included 4402 US surgical residents. This was an 82.4% response rate of the surveys sent.

Method: This study includes a cross-sectional survey. The concept of work-life balance was addressed by responses to the statement "The hours I am working are causing a strain on my family life."

Findings: In this study, 44.4% of married participants and 33.3% of single participants agreed that "The hours I'm working are causing strain on my family life." The study also reported married women were most likely to have strain on their family life brought on by work hours. In addition, 52.8% of participants with children (n=1,064) and 34.8% of participants without children (n=3,141) agreed that their hours worked per week cause a strain on their family life.

Conclusion: The study reveals that more married individuals feel a strain on family life caused by work. In addition, physicians with children are more likely to feel the same strain.

Shanafelt T, Boone S, Tan L et al. Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population. *Archives of Internal Medicine*. 2012;172(18):1377. doi:10.1001/archinternmed.2012.3199.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 27,276 received an invitation to complete the survey, 7,288 completed a survey

Method: Satisfaction with work-life balance was determined by asking the participants to rate their agreement with the statement “My work schedule leaves me enough time for my personal life/family”. The options given were strongly agree, agree, neutral, disagree, and strongly disagree. Those who answered strongly agree or agree were determined to be satisfied with their work-life balance.

Findings: In this study, work-life balance was compared among all specialties of medicine and with the general population. Physicians worked an average of 10 hours more per week than those in the general population. Of the physicians, 40.1% were dissatisfied with work-life balance while only 23.1% of the general public was dissatisfied with work-life balance. In addition, female physicians were about 5% more likely to be dissatisfied with work-life balance than their male counterparts.

Conclusion: Overall, physicians are more likely to be dissatisfied with their current work-life balance. This may be due to the 10 more hours on average that a physician works during a given week. As seen in other studies, women are slightly more likely to be dissatisfied with work-life balance than men.

Shanafelt T, Oreskovich M, Dyrbye L. Avoiding Burnout: The Personal Health Habits and Wellness Practices of US Surgeons. *Journal of Vascular Surgery*. 2012;56(3):875-876. doi:10.1016/j.jvs.2012.07.016.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: A survey was sent to members of the American College of Surgeons. 25,073 were reached by email and 7,197 (28.7%) returned surveys.

Method: The survey asked questions about the importance of wellness promotion strategies. The responses were reported on a scale from “not important to me” to “essential.”

Results: The two areas of wellness promotion that applied to work life balance were “I protect time away from work with my spouse, family, and friends” and “I incorporate a life philosophy stressing balance in my personal and professional life.” The first was ranked 2nd in importance after “I find meaning in my work” and the latter was ranked 9th. Of the physicians that responded, 56.5% found protecting time away from work for family to be essential and 34.0% thought it was moderately important. In addition, 31.3% found a life philosophy stressing balance to be essential and 41.1% thought it was moderately important.

Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A. Satisfaction with work-life balance in plastic surgery: Results from a national survey. *Journal of the American College of Surgeons*. 2009;209(3):S82. doi:10.1016/j.jamcollsurg.2009.06.202.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: A survey was sent by mail to a randomized sample of members of the American Society of Plastic Surgeons. The survey was sent to 354 men and 354 women along with \$10 incentive. Of the 708 individuals to whom the survey was sent, 505 responded including 250 men and 255 women.

Method: The survey used a five-point response range from highly dissatisfied (1) to highly satisfied (5). For analysis, 1-3 were considered to be dissatisfied and 4-5 were considered to be satisfied. A scale of satisfaction was created using three statements: 1) I have too much work to do everything well, 2) I am satisfied with my career, and 3) I am satisfied with my time management between career and personal responsibilities.

Results: In this study, male surgeons were more likely to be satisfied with work-life balance than female surgeons. Those with an age of greater than 60 years were 1.7x more likely to be satisfied with work-life balance as those under 40. Finally, individuals that were single were nearly twice as likely to be satisfied with work-life balance in comparison to those that were married or partnered.

Conclusion: The data from this study suggests that female surgeons are less satisfied with work-life balance than their male counterparts. However, data regarding the influence of marital status on work-life balance was disregarded due to large confidence intervals.

Contag S, Golub J, Teknos T et al. Professional Burnout Among Microvascular and Reconstructive Free-Flap Head and Neck Surgeons in the United States. *Arch Otolaryngol Head Neck Surg*. 2010;136(10):950. doi:10.1001/archoto.2010.154.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: A total of 60 microvascular and reconstructive free-flap head and neck surgeons were included in the study of the 141 mailed surveys.

Method: The researchers of this study looked at risk factors that lead to emotional exhaustion. Participants were asked to rate the degree to which common professional stressors affect their personal life on a scale of no effect to extreme effect.

Results: Data from this study suggests that there was a significant association between “work invading family life” and emotional exhaustion.

Conclusion: While work-life balance was not the main topic of this article, it was identified that emotional exhaustion can stem from an imbalance of work and family responsibilities.

Katz A, Mallory B, Gilbert J et al. State of the practice for pediatric surgery—career satisfaction and concerns. A report from the American Pediatric Surgical Association Task Force on Family Issues. *Journal of Pediatric Surgery*. 2010;45(10):1975-1982. doi:10.1016/j.jpedsurg.2010.05.011.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 282 pediatric surgeons and 80 partners of pediatric surgeons

Method: The survey was designed to collect information about career satisfaction and work-family balance. A Likert scale was used to rank agreement with various statements relating to career satisfaction.

Results: Researchers found that only 11% of participants strongly agreed with the statement that they “balanced professional and family responsibilities. However, no other data was given about the percentages that gave other responses.

Conclusion: This study revealed that the balance between work and family is challenging for pediatric surgeons to maintain. However, since the article did not report all data, this study only gives a small glimpse into the influencers of work-life balance.

Tracy E, Wiler J, Holschen J, Patel S, Ligda K. Topics to ponder: Part-time practice and pay parity. *Gender Medicine*. 2010;7(4):350-356. doi:10.1016/j.genm.2010.07.003.

Keywords: work-life balance or lifestyle balance; physician or doctor or healthcare professional; happiness or satisfaction

Confines: performed in the U.S., performed in the last five years, English language

Sample: 4992 Women Physicians Congress members – returned a 15% response rate; 596 female American Medical Association members – quota of 148 reached

Method: The survey inquired about pay level, years of practice, part time vs full time, and importance of work-life balance.

Results: Data from the study suggests that 91% of female physicians see work-life balance as a priority. Researchers also found that work schedule control could lead to a higher satisfaction with the balance between work and home.

Conclusion: While this study did not assess the work-life balance of the participants, it did reveal that women see work-life balance as a high priority in their lives. In addition, the ability to have a say in the number of hours worked per week may lead to a better balance.

ANNOTATED BIBLIOGRAPHY

Dyrbye L, Varkey P, Boone S, Satele D, Sloan J, Shanafelt T. Physician Satisfaction and Burnout at Different Career Stages. *Mayo Clinic Proceedings*. 2013;88(12):1358-1367. doi:10.1016/j.mayocp.2013.07.016.

Dyrbye is a member of the Division of Primary Care Internal Medicine. This article is intended to provide information about the work lives of US physicians. This article was similar to other articles in this review because it addressed work-life balance based on a scale from strongly disagree to strongly agree. While a large portion of the article did not pertain to this study, it provided pertinent data about satisfaction with work-life balance among US physicians from all specialties.

Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, Rakel D. Abbreviated Mindfulness Intervention for Job Satisfaction, Quality of Life, and Compassion in Primary Care Clinicians: A Pilot Study. *The Annals of Family Medicine*. 2013;11(5):412-420. doi:10.1370/afm.1511.

Based upon other publications, Fortney is interested in applying the principles of mindfulness to medicine for both the patient and the physician. The article is intended to reach physicians that are interested in using mindfulness techniques to combat dissatisfaction with work-life balance. This article is different from many of the other articles in this study because it proposes a possible solution and evaluates the interventions

impact on participant's work-life balance. However, this article provides one intervention that can be applied when a physician is unable to obtain work-life balance.

Frugé E, Margolin J, Horton T et al. Defining and managing career challenges for mid-career and senior stage pediatric hematologist/oncologists. *Pediatric Blood & Cancer*. 2010;55(6):1180-1184. doi:10.1002/pbc.22658.

Frugé works with the Texas Children's Cancer Center and Baylor College of Medicine and is interested in promoting awareness about diversity and bias, particularly in hematology and oncology. The article is intended for hematologists and oncologists that may have a level of dissatisfaction with work-life balance. This study was different from other studies in this review because the participants were able to describe personal struggles with balance in their own words. However, this study still reported that balance is a concern in various career stages as suggested by Dyrbye. This article also included several workshops to improve work-life balance such as "shifting workload" and "developing administrative skills;" however, these interventions were not evaluated.

Shanafelt T, Raymond M, Horn L et al. Oncology Fellows' Career Plans, Expectations, and Well-Being: Do Fellows Know What They Are Getting Into?. *Journal of Clinical Oncology*. 2014;32(27):2991-2997. doi:10.1200/jco.2014.56.2827.

Shanafelt has multiple articles that address the concept of work-life balance in the medical profession. He also focuses on burnout and career satisfaction. Shanafelt addresses oncologists and other individuals that suggest oncologists have a high level of career satisfaction. He is concerned about how the number of oncologists in the US will decrease in the coming years. This study was similar to others in this review because satisfaction with work-life balance was measured based on a scale from strongly disagree to strongly disagree. In addition, this study makes direct comparisons to another study presented in this review by Shanafelt T, Raymond M, and Kosty M et al. The article addresses fellows as well as practicing oncologists which gives insight into another career phase.

Surawicz C. J. Edward Berk Distinguished Lecture: Avoiding Burnout: Finding Balance Between Work and Everything Else. *The American Journal of Gastroenterology*. 2014;109(4):511-514. doi:10.1038/ajg.2014.44.

Surawicz is a gastroenterologist with the University of Washington School of Medicine. He gave the J. Edward Burk Distinguished Lecture in 2013 about how to find balance between work and life. The lecture was given at the Annual College of Gastroenterology meeting and the paper in this review was derived from that lecture. This was not a research paper. This paper is similar to the article by Forney because it addresses possible ways to improve satisfaction with work-life balance. These include self-reflection and use of appropriate coping strategies. This paper adds the idea of the various consequences of burnout in the medical profession that come from an improper balance between work and home life.

Shanafelt T, Raymond M, Kosty M et al. Satisfaction With Work-Life Balance and the Career and Retirement Plans of US Oncologists. *Journal of Clinical Oncology*. 2014;32(11):1127-1135. doi:10.1200/jco.2013.53.4560.

Shanafelt has multiple articles that address the concept of work-life balance in the medical profession. He also focuses on burnout and career satisfaction. This article is intended for individuals that are unaware of the work-life balance challenges that are faced by oncologists. This article is similar to another article by Shanafelt because both focus on mainly oncologists. However, "Oncology Fellows' Career Plans, Expectations, and Well-Being: Do Fellows Know What They Are Getting Into?" focuses more on comparison of fellows and practicing physicians while this article focuses only on practicing oncologists. This article gives more in depth information about the work-life balance of US oncologists such as how age, gender, and marital status can influence satisfaction.

Roberts D, Shanafelt T, Dyrbye L, West C. A national comparison of burnout and work-life balance among internal medicine hospitalists and outpatient general internists. *Journal of Hospital Medicine*. 2014;9(3):176-181. doi:10.1002/jhm.2146.

Roberts's other studies focus on burnout, patient assignment, and hospital medication errors. Roberts is a member of the division of hospital internal medicine in Phoenix, Arizona. This article is intended for individuals that are interested in the well-being of internal medicine hospitalists or outpatient general internists. This article, like many others in this

review, used a Likert scale along with the statement “work schedule leaves enough time for personal life/family.” Roberts’s data reveals information about two specialties otherwise not mentioned in this review: internal medicine hospitalists and outpatient general internal medicine physicians.

Moriarity A, Brown M, Schultz L. We Have Much in Common: The Similar Inter-generational Work Preferences and Career Satisfaction Among Practicing Radiologists. *Journal of the American College of Radiology*. 2014;11(4):362-368. doi:10.1016/j.jacr.2013.08.008.

Moriarity is a part of the Department of Radiology at Henry Ford Hospital in Detroit, Michigan. Other articles by Moriarity focus on the retirement plans of radiologists and various types of imaging. This article is intended to explore the similarities between two generations of radiologists. Moriarity’s article is unique because it compares the work-life balance between two generations of individuals in the same specialty. The importance of work-life balance in relation to workplace satisfaction for radiologists is illuminated by this study.

Sullivan M, Yeo H, Roman S, Bell R, Sosa J. Striving for Work-Life Balance: effect of marriage and children on the experience of 4402 US general surgery residents. *Annals of Surgery*. 2013;257(3):571-576. doi:10.1097/sla.0b013e318269d05c.

Sullivan is a member of the Department of Surgery at the Yale School of Medicine. Other articles by Sullivan focus on different aspects of a general surgery resident's experience. The current article is intended for general surgery residents and potential surgery residents to illuminate the effect of marriage and children on their experience as a resident. This survey is unique in this review because it looks at the work-life balance of residents rather than practicing physicians. This is similar to the comparison between fellows and practicing oncologists by Shanafelt T, Raymond M, Horn L et al.

Shanafelt T, Boone S, Tan L et al. Burnout and Satisfaction With Work-Life Balance Among US Physicians Relative to the General US Population. *Archives of Internal Medicine*. 2012;172(18):1377. doi:10.1001/archinternmed.2012.3199.

Shanafelt has multiple articles that address the concept of work-life balance in the medical profession. He also focuses on burnout and career satisfaction. This article is intended to address work-life balance differences between the general population and physicians aged 29-50. The data in the study is unique because it expands beyond the realm of medicine. It gives a new dimension, comparison to the general population, to the current review.

Shanafelt T, Oreskovich M, Dyrbye L. Avoiding Burnout: The Personal Health Habits and Wellness Practices of US Surgeons. *Journal of Vascular Surgery*. 2012;56(3):875-876. doi:10.1016/j.jvs.2012.07.016.

Shanafelt has multiple articles that address the concept of work-life balance in the medical profession. He also focuses on burnout and career satisfaction. In the present study, the intended audience is individuals interested in learning strategies to promote wellness as a physician. This study illuminates the idea that work-life balance is ranked second in importance to physicians following finding meaning in work.

Streu R, Hawley S, Gay A, Salem B, Paul A, Alderman A. Satisfaction with work-life balance in plastic surgery: Results from a national survey. *Journal of the American College of Surgeons*. 2009;209(3):S82. doi:10.1016/j.jamcollsurg.2009.06.202.

Streu is a part of the Department of Surgery at the University of Michigan Medical Center. Other articles by Streu focus on career satisfaction and burnout levels of plastic surgeons as well as breast augmentation research. The adjusted odds ratio in this study is similar to the odds ratios used by other studies in this review. This article adds a new dimension to the present review by considering the work-life balance of plastic surgeons.

Contag S, Golub J, Teknos T et al. Professional Burnout Among Microvascular and Reconstructive Free-Flap Head and Neck Surgeons in the United States. *Arch Otolaryngol Head Neck Surg*. 2010;136(10):950. doi:10.1001/archoto.2010.154.

Contag is a member of the Emory University School of Medicine. Other research by Contag relates to dissection modules for surgical training. This article is intended to address

individuals concerned with how physician burnout affects patient outcomes. This article is unique in this review because it relates work-life balance to emotional exhaustion and thus, performance. Data from this review illuminates the fact that emotional exhaustion is felt by physicians when work invades family life.

Katz A, Mallory B, Gilbert J et al. State of the practice for pediatric surgery—career satisfaction and concerns. A report from the American Pediatric Surgical Association Task Force on Family Issues. *Journal of Pediatric Surgery*. 2010;45(10):1975-1982. doi:10.1016/j.jpedsurg.2010.05.011.

Katz is a member of the Department of Pediatric General and Thoracic Surgery at the Children's Hospital of Pittsburgh. Other articles by Katz study consent for emergency medical services for minors and fetal care. While this survey did not report all data collected, it reported that many pediatric surgeons find the training period to be stressful on the family environment.

Tracy E, Wiler J, Holschen J, Patel S, Ligda K. Topics to ponder: Part-time practice and pay parity. *Gender Medicine*. 2010;7(4):350-356. doi:10.1016/j.genm.2010.07.003.

Tracy is a member of the Department of Obstetrics and Gynecology at Massachusetts General Hospital in Boston. Other research by Tracy studies history of medicine fellowship, physician re-entry, and professional liability insurance for part time physicians. This study is

unique because it focuses solely on female physicians. Research from this article indicates that a high percent of women view work-life balance as a priority.